

(Demo) Annual Narrative



FWSANV-0168



QUARTERLY REPORT OF ACTIVITIES

PERIOD -- MAY 1 TO JULY 31, 1939

MALHEUR MIGRATORY WATERFOWL REFUGE

\*\*\*\*\* \*

United States Department of the Interior  
Bureau of Biological Survey  
Burns, Oregon



S - Publications  
Quarterly Report

Malheur Refuge  
Burns, Oregon  
September 29, 1939

Acting Regional Director  
404 U. S. Court House  
Portland, Oregon

Dear Mr. Murray:

Attached herewith please find Malheur Refuge Report of  
Activities, covering the period May 1 to July 31, 1939.

If this report meets with your approval, please initial  
the original copy and forward it to the Washington office.

Very truly yours,

J. C. Scharff  
Refuge Manager

fac  
encls.

cc: Attached



### WEATHER CONDITIONS

General weather and water conditions of a more-or-less unfavorable nature prevailed throughout the months of May, June and July. The temperature during May was approximately normal but the maximum of 96° for June was much higher than that which normally prevails and the maximum of 100° for July was higher than for any summer since 1936. Precipitation for this period was disappointingly low, being only 30% of the precipitation for the corresponding period last year.

The following weather recordings were made at Malheur Refuge:

<u>Sod House Weather Bureau Station</u>			
<u>Weather Data--May, June, July, 1939--Summary</u>			
<u>Month</u>	: Total Inches :	:	:
	: Precipitation :	Maximum	Minimum
	: During Month :	Temperature	Temperature
May	.15	86	28
June	.20	93	28
July	.60	100	39
Total Precipitation	.95		
Maximum Temperature		100	
Minimum Temperature			28

As stated in the 1939 Malheur Refuge Annual Report, we have experienced a very dry spring season with very little rainfall and a dearth of snow in the higher elevations. This, coupled with the dearth of precipitation and high temperatures of the May-July period, caused a rapid recession in the water level of Malheur Lake. By August first the water was lower than at any time during the summer of 1938 and continued hot and rainless weather, which we can yet expect for at least six weeks, will deplete our water supply still further.

In spite of the shortage of water, we have been able, because of our newly-developed water control facilities in the Blitzen Valley, to maintain a very satisfactory level in that area during the nesting season. This is evidenced by a splendid crop of young waterfowl.



## THE FIRE MENACE

It goes without saying that hot, dry weather appreciably increases the fire hazard on any area bearing an abundance of vegetation. This is particularly true on the Malheur Refuge. The abundant forage crop of 1938 was only about 40% utilized by haying and grazing permittees so the dry, dead grasses from last season's crop are prevalent throughout the Refuge.

We have been fortunate thus far in that our only fire has been a one-half acre fire on protected lands outside the Refuge. This fire occurred on July 31, was caused presumably by a smoker and was completely extinguished  $7\frac{1}{2}$  hours after its discovery.

Since "an ounce of prevention is worth a pound of cure", we have taken a number of steps which we feel will materially lessen the possibility of fire losses this summer. Signs have been posted at all road entrances warning the traveling public that smoking while traveling on the Refuge is strictly prohibited. A general memorandum has been prepared setting forth some fire prevention rules and their observance and compliance is requested of all Refuge, CCC or any other personnel on the area. This memorandum has been brought to the attention of all personnel members and CCC enrollees and a copy has been sent to every permittee who is now using or will be making application to use any part of the Refuge.

As a control measure we have equipped a truck with ten 50-gallon drums filled with water and parked for a prompt get-away at any time. This truck is also equipped with a number of sacks, which can be soaked and used to very good advantage on a grass fire, twenty shovels and other equipment necessary for the initial attack on a fire.

We have tried out the new fire plow and believe that it will be adaptable to practically all conditions under which it will have to operate. We are also constructing a portable water tank and pump unit which will provide rapid loading and hauling of water to any portion of the Refuge which can be traveled by truck.

Since by far the greater danger prevails in the Malheur Lake unit, we have concentrated the fire control equipment at the Refuge headquarters. This is almost centrally located from the point of Refuge travel.



### 1939 HAS SUCCESSFUL NESTING SEASON

The 1939 nesting season in general was more favorable for nesting birds than that of the previous year. The goose nesting season, as a whole, was somewhat earlier and there was a remarkably high hatching success in both geese and ducks in comparison to the 1938 season.

An increase was noted in the average number of goose eggs per clutch, average hatch per clutch and per cent of nests hatching. It is also estimated that there was approximately a 17% increase in the number of geese nesting on the Refuge this year.

From nesting studies and field observations it is apparent that there was a marked increase in the number of ducks nesting on this Refuge this season over that of 1938. In the case of the duck nests it was also noted that there was an increase in the average number of eggs per clutch, average hatch per clutch and per cent of nests hatching.

It is noteworthy that the Cole Island Dike and the area adjacent to the dike were favorite nesting sites for waterfowl this season. It is conservatively estimated that there were 250 nests, predominantly mallard, in this area. The rank growth of Russian-thistle (Salsola pestifer) on either side of the dike seemed to provide the type of cover which the birds found most desirable for their nesting needs.

Six sandhill crane nests were located and nest histories recorded. Five of these hatched successfully and one was destroyed.

A tremendous increase is apparent in the avocets, black-necked stilts, curlews and other shore birds. The shore line of Malheur Lake is literally alive with these little, long-legged birds and their nests were prevalent in many localities of the Lake area. It was noted that three venturesome pairs of avocets threw caution to the wind and built their nests in the middle of the road atop the Cole Island Dike. Our observations lead us to conclude that they all successfully hatched.

The chart on the following page was assembled from data gained by the 1939 nesting studies and may provide some basis for speculation as to our total nesting population this season.



WATERFOWL NESTING DATA -- MALHEUR REFUGE

Season of 1939

Species	Nests by Sample Areas in Units								Total Nests Studied	Total Number Eggs	Average No. Eggs Per Nest (1939)	Average No. Eggs Per Nest (1938)
	1	2	3	4	7	8	10	12				
Mallard	4	24		69	5	88	1	47	238	2152	9.04	9.45
Gadwall	4	9		15		21	4	17	70	677	9.67	7.75
Cin. Teal	3	8		8	1	19	2	23	64	600	9.38	7.67
Pintail	2	3		19		14	4	11	53	371	7.00	7.00
Shoveller	3	7		2		13		21	46	439	9.54	6.71
Redhead		6		1		8			15	166	11.07	8.38
Canvasback						1		3	4	39	9.75	9.54
G. W. Teal	1						1	1	3	28	9.33	-
Lesser Scaup								1	1	6	6.00	-
Unidentified		1		11		4		7	23	149	6.48	5.40
TOTAL DUCKS	17	58		125	6	168	12	131	517	4627	8.95	8.29
Canada Geese	10	16	35	27	42	32		101	263	1341	5.10	4.59



A  
PICTORIAL  
SHOWING SOME OF  
MALHEUR'S NESTING BIRDS



The first view of the grand nesting area which meets  
the eye of the home-seeking migrant as he crosses the south-  
ern boundary of Malheur Refuge.



A grand big muskrat house--



--and--



--the Canada goose nest perched thereon.



Pelicans! Pelicans! every where--



--and--



--see what they left behind!



A solitary juniper--

and---



--the young Swainson hawk nestled in its branches.



An eared grebe colony on Boca Lake--



--and--



--the colony with the nest of a Forster's  
tern in the foreground.



The duplex apartment of two pairs of great horned owls--



--and--



--here the eggs are beginning to hatch.  
(Note kangaroo rats and jack rabbit.)





Old mother goose began to suspect  
that something was invading her domicile.



A western grebe's hideout in the tules of Malheur Lake.



### DUCK SICKNESS

The hot, dry weather has accentuated the possibility of a severe outbreak of botulism again this summer and, although the outbreak thus far has not been serious, we are taking every precaution to prevent this sickness from reaching the epidemic stage.

The first evidence of botulism was noted July 3 when six ring-billed gulls were found with attendant diagnostic symptoms. No further evidence of poisoning was found until July 13 when four dead birds were discovered. The period July 14 to 19 saw a comparatively mild outbreak of this malady when rescue crews picked up 184 birds. Although an extensive patrol was maintained at all times, the period July 20 to 31 revealed very little evidence of botulism. The malady thus far has not been confined to any particular area and sick or dead birds have been found in ponds of the Blitzen Valley as well as scattered portions of the lake area. It has been noted that a very large percentage of the mortality thus far has been confined to ducklings.

Since we feel that prompt action while the sickness is in an infant stage is the best means of control, we have taken a number of steps toward quickly combatting the disease before it has a chance to spread. In June a general memorandum was written to all personnel members stressing the importance of prompt action against botulism and requesting that they, while in pursuit of their regular duties about the Refuge, carefully observe all birds and immediately report any indications of sick or ailing birds that may be seen. This was followed a short time later by another memorandum setting forth the responsibility of the various personnel members in botulism control and outlining their duties. A CCC project has been set up in the camps and when necessary a crew or crews of CCC enrollees are detailed to picking up the sick and dead birds.

The makeshift hospital has been repaired and expanded in order that facilities will be available to care for the sick birds when they are brought in. A game management student from Oregon State College has been employed temporarily to assist in the botulism work and has been placed, under supervision, in charge of the hospital.



### PREDATOR CONTROL

The hunter assigned by the Division of Predator and Rodent Control to the Malheur Refuge accounted for the following animals during the months of May, June and July:

<u>Month</u>	<u>Coyotes</u>	<u>Bobcats</u>
May	47	
June	32	1
July	<u>46</u>	<u>—</u>
TOTALS	125	1

Although it would seem that these extensive inroads into the coyote population should exterminate them in a comparatively short time, it seems as though there is always another to take the place of the one killed. This is understandable, however, when one considers the thousands of acres of surrounding country which furnish a splendid habitat for these animals. All in all we feel that the hunter is doing splendid work toward keeping the coyote population of the Refuge to a minimum.

### PLANTINGS

The grain, alfalfa and crested wheat grass planted in the Grain Camp area during the latter part of April have shown an abundant growth. Unfortunately most of the Canada field peas were flooded out but a sufficient acreage remains to observe the possible use as a food crop for birds.

The grain shows every indication of a bumper crop and if it can be harvested before the hordes of blackbirds have an opportunity to do too much damage, we should harvest between three and four thousand bushels of wheat, oats and barley.



### C.C.C. DEVELOPMENTS

Camps Five Mile, BS-1, and Sod House, BS-2, have expended 17,005 man-days during the May-July period toward a number of very worthwhile developments on the Malheur Refuge. Following is a tabulation of some of their major accomplishments:

<u>Class.</u>	<u>Type of Development</u>	<u>Quantity</u>
101	Foot Bridges	1 Ea.
111	Equipment and Supply Storage Houses	1 Ea.
120	Other Buildings	8 Ea.
131	Fences	2674 rods
133	Levees, Dikes and Jetties	808 cu. yds.
143	Pipe or Tile Lines	450 ft.
146	Wells, Inc. Pumps and Pump Houses	1 Ea.
153	Signs, Markers and Monuments	1 Ea.
157	Miscellaneous Structural Improvements	3 Ea.
202	Truck Trail Maintenance	1347 Miles
316	Crushing Rock	255 tons
401	Clearing and Cleaning Channels	72,877 sq.yds.
403	Lining Waterways	303 sq.yds.
404	Earth Excavation	30,700 cu.yds.
405	Rock Excavation	6,289 cu.yds.
407	Rock Riprap	535 sq.yds.
411	Water Control Structures	4 Ea.
606	Fire Presuppression	336 man-days
703	General Cleanup	227.8 acres
705	Landscaping, Undifferentiated	2 acres
706	Moving and Planting Trees	956 Ea.
713	Razing Undesirable Structures	629 man-days
716	Soil Preparation	80 acres
902	Food and Cover Planting	12 acres
906	Other Wildlife Activities	319 man-days
1012	Preparation and Transportation Materials	735 man-days
1023	Surveys	268 man-days
1026	Equipment Repair and Construction	1483 man-days
1028	Warehousing	485 man-days

In addition to the accomplishments listed above, a number of man-days have been expended on such developments as vehicle bridges, cattle guards, telephone lines, etc. which have not progressed far enough to show any units of completion.



### ECONOMIC USES

In accordance with administrative policy no stock whatsoever has been allowed on the Refuge during the May-July period. However, July 15 heralded the opening of the haying season and the haying operations are now in full swing. We expect a fair hay crop this year but it will be somewhat short over that of a year ago.

Because of the poor condition of outlying ranges, we have already this season experienced an abnormal demand for haying and grazing privileges on the Refuge. Indications are that the demand will be in excess of the supply this season and we should experience no difficulty in selling any and all feed which can be disposed of without injuring in any way the biological developments of the area.

### VISITORS

The months of May, June and July brought more interested visitors to the Malheur Refuge than has any other three-months' period since the Refuge was established. As stated in our annual report, we have been favored with visits from state and government officials, ornithological groups, sportsmen's organizations, college groups, game commissions and representatives of several newspapers and news gathering organizations.

On July 22 about 80 members of the Order of the Antelope, a sportsmen's organization of the West, made their annual trip over the Refuge and then proceeded on to the Hart Mountain Antelope Refuge for their regular get-together. Many of the members who saw the Malheur for the first time expressed an earnest desire to return at a later date when they had more time for sight-seeing and exploring the many interesting portions of the Refuge.

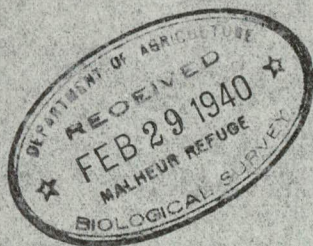


THE INTERIOR  
UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF BIOLOGICAL SURVEY

OFFICE OF REGIONAL DIRECTOR  
404 U. S. COURTHOUSE, PORTLAND, OREGON  
OFFICE OF REGIONAL DIRECTOR  
404 U. S. Court House  
Portland, Oregon

8  
REGION No. 1

WASHINGTON  
OREGON  
CALIFORNIA  
NEVADA



February 27, 1940

Chief, Bureau of Biological Survey,  
Department of the Interior,  
Washington, D. C.

Attention: Mr. Salyer

Dear Sir:

Reference is made to letter of February 19 from Mr. Salyer commending excellent narrative report from Malheur Refuge covering period from August to October, 1939.

Might we add that this letter is very much appreciated. While we do not expect to receive bouquets too often, when they do come we want you to know they are appreciated.

Very truly yours,

T. B. Murray  
Acting Regional Director

TBM:vb  
c - Mr. Scharff ✓  
(Dictated but not read)